

Application/Control Number: 09/972,929
Art Unit: 2655

Docket No.: 2000-0499

REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

As a result of the present amendment, claims 1-14, 16, 21, 23 and 24 are pending. Claims 1, 4, 5, 9, 13 and 14 have been amended, and claims 19 and 22 have been canceled without prejudice or disclaimer. Applicants submit that the amendments to claim 4 were made only to improve form and do not change the scope of the claim.

Rejection of Claims 1, 5, 9, 13-14, 16, 19, 21-22 and 24

On page 2 of the Office Action, the Examiner rejected claims 1, 5, 9, 13-14, 16, 19, 21-22 and 24 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 6,418,411 to Gong in view of U.S. Patent No. 6,157,670 to Kosanovic. Applicants traverse the rejection of claim 22, the features of which were incorporated into claim 1. Applicants canceled claims 19 and 22 without prejudice or disclaimer, thereby, making the rejection of claims 19 and 22 moot. Therefore, Applicant respectfully request that the rejection of claims 19 and 22 be withdrawn. Applicants submit that the amended independent claims obviate the rejection.

Amended independent claim 1 is directed to a method of dynamic re-configurable speech recognition. The method includes, among other things, adjusting the periodic time (for determining parameters of a background model during a received voice request) based, at least in part, on determined changes in sampled noise information, wherein the adjusting of the periodic time further includes increasing the periodic time when successive changes in sampled noise information do not exceed a threshold value. On page 5 of the Office Action, with respect to claim 22, the Examiner alleged that Kosanovic, at col. 4, lines 20-26, discloses or suggests this feature. Applicants disagree.

Kosanovic, at col. 4, lines 9-26, discloses:

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FIG. 2 illustrates a second exemplary plot of the calculated ebmin for a set of thirteen signal blocks and the updated estimate of background noise, E_n . As illustrated in FIG. 1, the estimated background noise, E_n , will not vary as widely as the measured minimum energy, ebmin, of the signal blocks. At SB_7 , the measured minimum energy exceeds the Max threshold and therefore the E_n is not updated. At each SB (1, 2, 5, 6, 11) where the measured ebmin_[k] exceeds the previous ebmin_[k-1] and is below Max, the E_n is updated half the difference between ebmin_[k] and the measured ebmin_[k-1] for the preceding SB_[k-1]. When the measured ebmin_[k] is less than the previous ebmin_[k-1] (points 3, 4, 9, 10 and 12), E_n is updated down to the measured ebmin_[k] of the SB_[k] to ensure that the estimated background energy level is at a minimum so that low voice is not mistakenly classified as background noise.

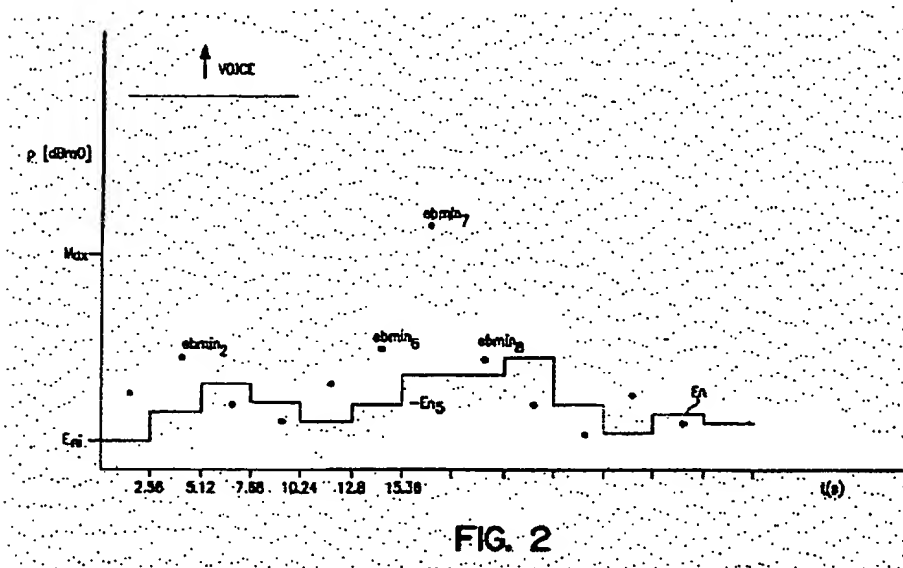


FIG. 2

Thus, Fig. 2 of Kosanovic discloses an exemplary plot of the lowest minimum energy level (ebmin) calculated for a set of signal blocks and an updated estimate of signal noise. Estimated background noise, E_n , does not vary as much as ebmin of the signal blocks. When the measured ebmin_[k] exceeds the previous ebmin_[k-1] and is below Max (at each of SB (1, 2, 5, 6, 11)), E_n is updated by half the difference between ebmin_[k] and the measured ebmin_[k-1] for signal block SB_[k-1]. On the other hand, when the measured ebmin_[k] is less than the previous ebmin_[k-1] (points 3, 4, 9,

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10 and 12) E_n is updated down to the measured $ebmin_{l[k]}$ of signal block $SB_{l[k]}$. This ensures that low voice is not mistaken as background noise.

Applicants submit that the above cited portion of Kosanovic discusses how to adjust the estimated background noise, E_n , based on a comparison of minimum measured energy for a signal block compared to a minimum measured energy level for a previous signal block. Kosanovic is completely devoid of any disclosure or suggestion of increasing the periodic time (for determining parameters of a background model during a received voice request) when successive changes in sampled noise information do not exceed a threshold value, as required by amended claim 1. Gong also fails to disclose or suggest this feature.

For at least the reasons discussed above, Applicants submit that amended independent claim 1 is patentable over Gong in view of Kosanovic and respectfully request that the rejection of claim 1 be withdrawn.

Amended independent claims 5, 9, 13 and 14 recite a feature similar to the previously discussed feature of claim 1. Therefore, Applicants submit that claims 5, 9, 13 and 14 are patentable over Gong in view of Kosanovic for reasons similar to those provided with respect to claim 1. Applicants, therefore, respectfully request that the rejection of claims 5, 9, 13 and 14 be withdrawn.

Dependent claims 16, 21 and 24 depend either from claim 1 or claim 5 and are patentable over Gong in view of Kosanovic for the reasons discussed above with respect to claim 1 or claim 5. Therefore, Applicants respectfully request that the rejection of claims 16, 21 and 24 be withdrawn.

Rejection of Claims 2-4, 6-8, 10-12 and 23

On page 5 of the Office Action, the Examiner rejected claims 2-4, 6-8, 10-12 and 23 under 35 U.S.C. 103(a) as allegedly being unpatentable over Gong in view of Kosanovic, and

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further in view of U.S. Patent No. 5,008,941 to Sejnoha. Applicants submit that amended claims 1, 5 and 9 obviate the rejection.

Amended independent claims 1, 5 and 9 are patentable over Gong in view of Kosanovic for at least the reasons discussed above. Applicants submit that Sejnoha fails to satisfy the deficiencies of Gong and Kosanovic. Therefore, amended independent claims 1, 5 and 9 are patentable over Gong, Kosanovic and Sejnoha. Claims 2-4, 6-8, 10-12 and 23 depend from one of claims 1, 5 or 9 and are patentable over Gong, Kosanovic and Sejnoha for at least the reasons discussed with respect to claims 1, 5 and 9. Therefore, Applicants respectfully request that the rejection of claims 2-4, 6-8, 10-12 and 23 be withdrawn.

CONCLUSION

Having addressed all rejections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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